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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

THAI, XUAN MARIAN

ART UNIT	PAPER NUMBER
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2111

DATE MAILED: 03/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/353,938

Applicant(s)

JAGGERS ET AL.

Examiner

XUAN M. THAI

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23, 25-39, 41-48 and 50-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23, 25-39, 41-48 and 50-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This is in response to amendment filed on December 16, 2003. Claims 1-23, 25-39, 41-48 and 50-53 remain pending in the instant application.
2. The rejections of claims 39 and 48 as being anticipated by Friend et al. and of claims 41-44 and 50-53 as being unpatentable over Friend et al. in view of the Mini-PCI Spec have been withdrawn in view of the remarks filed by applicants on December 16, 2003.
3. The rejections of claims 1-4, 6-18, 20-23, 25-30, 32-38, 41-48 and 50-53 under 35 U.S.C. 103(a) as being unpatentable over Mini PCI Specification in view of Fukuzumi (USPN 5,737,582) are maintained.
4. The rejections of claims 5, 19 and 31 under 35 U.S.C. 103(a) as being unpatentable over Mini PCI Specification in view of Fukuzumi (USPN 5,737,582), and in further view of Gilbert (USPN 6,067,583) are maintained.
5. New rejections have been applied in this Office Action in view of newly found USPN 6,266,724 issued to Harari et al. Details of the rejections old and new are stated herein below.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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7. Claims 39 and 48 are rejected under 35 U.S.C. 102(e) as being anticipated by Harari et al. (USPN 6,266,724; Harari).

As per claim 39, Harari discloses the claimed invention including a system comprising: a modular bay (mother card 10; fig. 3) having a removable-card connector (e.g. connector 14; fig. 3), the modular bay operable to provide a housing for a removable card (see fig. 3); and the removable card electrically coupled to the removable-card connector such that the removable card defines a functionality of the system (e.g. defines a function such as FLASH memory or modem functions or floppy drives or hard disk drive or network adapters; see figs. 5A, 7; col. 4, lines 35-67; col. 5, lines 1-5).

As per claim 48; the claim is similar in scope to claim 39 except for being drafted in a method format; therefore, the claim is being rejected under the same rationale as claim 39 above.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 41-44 and 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harari et al. (USPN 6,266,724; Harari) in view of the Mini Peripheral Component Interconnect Specification (Mini PCI Spec).

As per claims 41-44, Harari discloses the bay (mother card 10; fig. 3) comprises the connector 14 for connecting the removable circuit card to the system bus (see fig. 4). Harari

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further disclose that the connector and the removable card(s) are of PCMCIA types card or PC card based (see col. 2, lines 15-39). Harari do not disclose a mini-PCI connector(s) or card(s). However, the Mini PCI Spec at the time the invention was made teaches that it is known to make use of mini-PCI connectors and cards for smaller systems such as in the one disclose by Harari (see Mini PCI Spec, pages 5-6 to 5-25 for types I-III form factors connectors and cards). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modified the Harari system to incorporate the teachings of the mini-pci spec connectors and cards as taught by the Mini PCI Spec. The modified system would increase the number of implementation options. It would also allow for upgradability, flexibility, reduced cost, serviceability, reliability, reduced size which permits a higher level of integration of data communications devices into a small restricted mechanical environments (see pages 1-3 and 1-4).

As per claims 50-53, the claims are similar in scope to claims 41-44 except they are drafted in a method format. Therefore, they are rejected under the same rationales applied to claims 41-44 above.

10. Claims 1-4, 6-18, 20-23, 25-30, 32-38, 41-48 and 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mini PCI Specification in view of Fukuzumi (USPN 5,737,582).

As per claims 1, 2, 6-8 and 10-12; Mini PCI Specification discloses a system comprising: a mini-PCI connector (e.g. systems connector; see pages 5-6 to 5-12). However, the Mini PCI Specification does not disclose a modular bay enclosure operable to provide an interconnect for mini-pci card, which defines a functionality of the modular bay enclosure, to a computer system;

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and mini-pci connector electrically mounted to the modular bay enclosure, the mini-pci connector allow a user to removable attach the mini-pci card to interconnect with the computer system.

Fukuzumi in the IC Card and IC Card System art teaches that it is known to enable a variety of functions to be added to a modular IC card (modular bay enclosure) by providing a connector (27) in the modular IC card (modular bay enclosure) to enable a plurality of function cards (sub-cards 22; e.g. mini-pci cards) to be added to the main body of an IC card 21 (modular bay enclosure), the function cards (subcards) defines a functionality of the modular bay enclosure (IC card) with ease (e.g. see Abstract, figs. 1, 2, 4, 5, 6, 7, 8 and respective detailed description) and in turn provides interconnect with the computer system. It would have been obvious to one of ordinary skill in the IC Card and IC Card system art at the time the invention was made to incorporate the teachings as taught by Fukuzumi in the system of Mini PCI Specification to achieve a modular system that allows for addition of and change of a plethora of function cards to be easily performed thus enable additional expansion of the memory or extension of the function after delivery to be added or changed with ease whereas it was impossible before. Furthermore, Fukuzumi states that IC card enclosure (modular bay enclosure) provides mechanical strength to protect internal circuit patterns of subcard (mini-pci card) from mechanical damage [see col. 7, lines 65 et seq. col. 8, lines 1-3]. Another advantage of incorporating the teachings of Fukuzumi is the reduction of cost (see cols. 1-2). Additionally, by using teachings of Fukuzumi, such as using IC card as modular bay enclosure and removable sub-card having connector for being connected to the main body of IC card (bay enclosure) and additional function disposed therein. The user is able to use sub-cards to meet purposes so that a

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variety of additional functions are easily added and therefore the convenience of the IC card (modular bay enclosure) is improved [see col. 16, lines 15-23].

As per claim 3, further comprises pin-type connector is taught by Mini PCI Spec and Fukuzumi.

As per claim 4, further comprises board-edge connector (e.g. single edge contacts; see fig. 4; element 27).

As per claim 9, the connectors are selected from a group comprising of video connector, audio connector, Ethernet connector and modem connector is within the teachings of Mini PCI Spec and Fukuzumi.

As per claims 13, 16, 20-22, and 24-26; The Mini PCI Spec and Fukuzumi discloses the claimed invention as detailed supra in reference to claim 1. The Mini PCI Spec and Fukuzumi further discloses an operating system, a CPU, system memory and I/O bus.

As per claims 14 and 15, The Mini PCI Spec and Fukuzumi further disclose various graphics capabilities and hardware for displaying graphics and network interface and card (e.g see Fukuzumi; col. 1).

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As per claim 17, further comprises pin-type connector is taught by Mini PCI Spec and Fukuzumi.

As per claim 18, further comprises board-edge connector is taught by Mini PCI Spec and Fukuzumi. (see fig. 4).

As per claim 20, a modular bay enclosure containing the module connector operably connected with said mini PCI connector is taught by Fukuzumi and Mini-PCI Spec.

As per claims 21 and 22, the mini-PCI connector is at least one of the connectors defined by a mini-PCI specification is within the disclosure of Mini-PCI Spec.

As per claim 23, the connectors are selected from a group comprising of video connector, audio connector, Ethernet connector and modem connector is within the teachings of Mini PCI Spec and Fukuzumi.

As per claims 27-30 and 32-38, they encompass the same scope of invention as to that of claims 1-4 and 6-12, except that they are drafted as method format rather than apparatus format, the claims 27-30 and 32-38 are therefore rejected for the same rationale as being set forth with respect to claims 1-4 and 6-12 supra.

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As per claims 39, 41-48, and 50-53, they encompass the same scope of invention as to that of claims 1-4 and 6-26, except that they are drafted as method and system format rather than apparatus format, the claims 39, 41-48, and 50-53 are therefore rejected for the same rationale as being set forth with respect to claims 1-4 and 6-26 supra.

11. Claims 5, 19 and 31 rejected under 35 U.S.C. 103(a) as being unpatentable over Mini PCI Specification in view of Fukuzumi (USPN 5,737,582), and in further view of Gilbert (USPN 6,067,583).

The combination of Mini PCI Specification and Fukuzumi discloses the claimed invention except for the use of a wireless connection medium.

Gilbert in his teachings of wireless adapter for a data-processing system having a computer including a computer interface connector for accepting a modem interface connector of a wired modem uses an adapter card to allow wireless communication. It would have been obvious to one of ordinary skill in the art to modify the system of the combination of Mini PCI Specification and Fukuzumi to allow for wireless option as taught by Gilbert. Such modification would provide alternative connector styles for interfacing to the different computers, modems, and systems; and other alternatives. This configuration would thus allow the same for example LAN adapter card to function in either a wired or a wireless configuration, and would allow upgrading the LAN card without replacing an entire wireless system. Thus being advantageous.

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12. Claims 1-4, 6-18, 20-23, 25-30, 32-38, 41-48 and 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mini PCI Specification in view of Harari et al. (USPN 6,266,724; Harari).

As per claims 1, 2, 6-8 and 10-12; Mini PCI Specification discloses a system comprising: a mini-PCI connector (e.g. systems connector; see pages 5-6 to 5-12). However, the Mini PCI Specification does not disclose a modular bay enclosure operable to provide an interconnect for mini-pci card, which defines a functionality of the modular bay enclosure, to a computer system; and mini-pci connector electrically mounted to the modular bay enclosure, the mini-pci connector allow a user to removable attach the mini-pci card to interconnect with the computer system.

Harari in the removable PC Card System art teaches that it is known to enable a variety of functions to be added to a modular mother card (modular bay enclosure) by providing a connector (14) in the mother card (modular bay enclosure) to enable a plurality of function cards (daughter cards 20; e.g. mini-pci cards) to be added to the main body of the mother card (modular bay enclosure), the function cards (daughter card) defines a functionality of the modular bay enclosure (mother card) with ease (e.g. see Abstract, figs. 1-10 and respective detailed description) and in turn provides interconnect with the computer system. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings as taught by Harari in the system of Mini PCI Specification to achieve a modular system that allows for addition of and change of a plethora of function cards to be easily performed thus enable additional expansion of the memory or extension of the function after delivery to be added or changed with ease whereas it was impossible before. Additionally, by

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using the teachings of Harari, such as using mother card as modular bay enclosure and removable daughter card having connector for being connected to the main body of mother card (bay enclosure) and additional function disposed therein. The user is able to use daughter cards to meet purposes so that a variety of additional functions are easily added and therefore the convenience of the mother card (modular bay enclosure) is improved [see cols. 3-4].

As per claim 3, further comprises pin-type connector is taught by Mini PCI Spec and Harari.

As per claim 4, further comprises board-edge connector (e.g. edge contacts; see figs. 5-9 or 5-12 of Mini PCI Spec).

As per claim 9, the connectors are selected from a group comprising of video connector, audio connector, Ethernet connector and modem connector is within the teachings of Mini PCI Spec and Harari.

As per claims 13, 16, 20-22, and 24-26; The Mini PCI Spec and Harari discloses the claimed invention as detailed supra in reference to claim 1. The Mini PCI Spec and Harari further discloses an operating system, a CPU, system memory and I/O bus.

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As per claims 14 and 15, The Mini PCI Spec and Harari further disclose various graphics capabilities and hardware for displaying graphics and network interface and card (e.g see Harari; col. 2).

As per claim 17, further comprises pin-type connector is taught by Mini PCI Spec and Harari. (e.g. see Harari figs. 8A, 8B)

As per claim 18, further comprises board-edge connector is taught by Mini PCI Spec and Harari. (see figs. 5A, 8A, 8B).

As per claim 20, a modular bay enclosure containing the module connector operably connected with said mini PCI connector is taught by Harari and Mini-PCI Spec.

As per claims 21 and 22, the mini-PCI connector is at least one of the connectors defined by a mini-PCI specification is within the disclosure of Mini-PCI Spec.

As per claim 23, the connectors are selected from a group comprising of video connector, audio connector, Ethernet connector and modem connector is within the teachings of Mini PCI Spec and Harari.

As per claims 27-30 and 32-38, they encompass the same scope of invention as to that of claims 1-4 and 6-12, except that they are drafted as method format rather than apparatus format,

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the claims 27-30 and 32-38 are therefore rejected for the same rationale as being set forth with respect to claims 1-4 and 6-12 supra.

As per claims 39, 41-48, and 50-53, they encompass the same scope of invention as to that of claims 1-4 and 6-26, except that they are drafted as method and system format rather than apparatus format, the claims 39, 41-48, and 50-53 are therefore rejected for the same rationale as being set forth with respect to claims 1-4 and 6-26 supra.

13. Claims 5, 19 and 31 rejected under 35 U.S.C. 103(a) as being unpatentable over Mini PCI Specification in view of Harari, and in further view of Gilbert (USPN 6,067,583).

The combination of Mini PCI Specification and Harari discloses the claimed invention except for the use of a wireless connection medium.

Gilbert in his teachings of wireless adapter for a data-processing system having a computer including a computer interface connector for accepting a modem interface connector of a wired modem uses an adapter card to allow wireless communication. It would have been obvious to one of ordinary skill in the art to modify the system of the combination of Mini PCI Specification and Harari to allow for wireless option as taught by Gilbert. Such modification would provide alternative connector styles for interfacing to the different computers, modems, and systems; and other alternatives. This configuration would thus allow the same for example LAN adapter card to function in either a wired or a wireless configuration, and would allow upgrading the LAN card without replacing an entire wireless system. Thus being advantageous.

Response to Arguments

14. In response to applicant's arguments that claimed combination does not teach a mini-PCI card, which defines the functionality of the modular bay enclosure, to a computer system. Such arguments is deemed not persuasive because as disclosed by Fukuzumi and admitted to by applicants on page 15, that Fukuzumi discloses "an IC card and an IC card system that enable a variety of functions to be added to the IC card". Applicants further disagrees with the examiner's statement that "adding functionality would means defining a functionality of the bay enclosure" (page 17). However, the examiner contends that "adding functionality" would precisely meet the definition of "defining a functionality" in that when a plurality of functional portion (sub-card) is replaceably inserted into the main body of the IC card through a connector 27 on the main body of the IC card, the functional portion *gives the IC card a distinguishing characteristic* (which is the meaning of "define" as found in the Webster's New World Dictionary, 3rd Edition). "By using a variety of foregoing key cards 22 to meet various purposes, a variety of functions can be easily added to the IC card 21 or functions can be changed easily" (Fukuzumi; col. 7, lines 15-18). Note that the functional portion (subcard) is removable and can be replaced with different functions (subcards) such as modem or LAN. Therefore, as claimed, the combination of the Mini-PCI Specification and Fukuzumi meets all the features of the claimed invention as detailed supra.

Additionally, applicants traverse the description of the IC card as being "modular" (REMARKS, page 17) and regards the comparison as improper hindsight. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper

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hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In this case, the applicants do not give any specific meaning to the term "modular" therefore, examiner uses the ordinary meaning attributed to the term "modular" which as define in Webster's New World Dictionary, 3rd edition, to be "of units of standardized size, design, etc. that can be arranged or fitted together in a variety of ways". The IC card is of standardized size and design that can be fitted together with a subcard and a bay of the IC card and the IC card thus can be fitted in the IC system. Thus, meeting the "modular" requirement of the claimed invention.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached Form PTO-892.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to XUAN M. THAI whose telephone number is 703-308-2064. The examiner can normally be reached on Monday to Friday from 8:30 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 703-305-4815. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



XUAN M. THAI
Primary Examiner
Art Unit 2111

XMT